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EXAMINER	
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ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/751,871	MOHAMMED, YUNUS	
	Examiner	Art Unit	
	Michael N. Opsasnick	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19,22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-11,19,22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows (6021409) in view of Sarukkai et al (5819220) in further view of Poirer et al (6321372).

As per claims 1, Burrows (6021409) teaches:

"receiving a word list.....word list" as receiving word list from paring module containing words as well as their contents (col. 6 lines 60-67)

"selecting word from the word list" as choosing the word (col. 11 lines 14-16)

"generating an index.....word" as index corresponding to the word (col. 11 lines 4-7)

"encoding the selected word.....data" as encoding the words (col. 12 lines 50-63; col. 14 lines 48-55)

"writing the encoded word.....memory" as storing the entries (col. 12 lines 50-67).

Burrows (6021409) does not explicitly teach using the word techniques in a speech related application (Burrows (6021409) teaches the use of the word techniques in an internet environment), however, Sarukkai et al (5819220) teaches using word list techniques in web based speech applications (Fig. 3, subblock 32,40,42, interacting with a speech recognition engine, subblock 36). Therefore, it would have been obvious to one of ordinary skill in the art of internet information portals to adapt the teachings of Burrows into speech related web applications because it would advantageously tailor the speech enabled sites to specific vocabularies (Sarukkai et al (5819220), col. 3 lines 39-45).

The combination of Burrows (6021409) in view of Sarukkai et al (5819220) does not explicitly detail the use of the words in a speech lexicon memory, however, Poirer et al (6321372) teaches the providing of internet information in the form of providing linguistic services that include speech lexicons, with pronunciation and part of speech (Poirer et al (6321372), col. 8 lines 52-65). Therefore, it would have been obvious to one of ordinary skill in the art of internet information services to modify the teachings of the combination of Burrows (6021409) in view of Sarukkai et al (5819220) with the use of speech lexicons because it would advantageously be used to provide linguistic services (Poirer et al (6321372), col. 4 line 55 – col. 5 line 10).

As per claim 2, Burrows (6021409) teaches:

"repeating the steps.....data" as feedback loop for the next word (fig. 2, subblock 59, back to subblock 130, to repeat the page and parsing module)

As per claims 3,22, Burrows (6021409) teaches:

"writing the codebooks....lexicon memory" as stored data structure with an index format and pointer (col. 13 lines 24-32, lines 45-51) can be considered as a codebook.

As per claim 4, Burrows (6021409) teaches:

"counting the words....word list" as using hash encoding to evenly distribute over the buckets (col. 14 lines 48-55)

As per claim 5, Burrows (6021409) teaches:

"determining....memory" as using index and pointers for the next available locations (col. 13 lines 45-50)

As per claim 6, Burrows (6021409) teaches:

"calculating.....hash table" as using hash encoding to evenly distribute over the buckets (col. 14 lines 48-55; and Figs. 9 and 10)).

As per claim 7, Burrows (6021409) teaches:

"writing an offset.....memory" as computing a delta value as an offset (col. 11 line 65 – col. 12 line 6).

As per claim 8, Burrows (6021409) teaches:

"providing...word encoders" as compressing the word entries based on delta values (col. 11 line 40 – col. 12 line 26; encoding)

"providing....data encoders" as word list with domains such as attributes, and encoding based on that information (col. 9 lines 21-29)

As per claim 9, Burrows (6021409) teaches Huffman coding (col. 12 lines 45-47)

As per claims 10, Burrows (6021409) teaches:

"writing a data structure.....dependent data" as hash encoding used (col. 14 lines 48-58) including content (col. 7 lines 58-63; col. 8 lines 19-26)

"wherein each word dependent data portion....portion" as indicating the word an location pairs (including content -- col. 7 line 65 – col. 8 line 53)

As per claim 11, Burrows (6021409) teaches:

"writing a data structure....separator" as words and their representations have a separator (col. 6 lines 56-67)

As per claims 19, Burrows (6021409) teaches:

"a compressed lexicon.....builder" as word list with domain such as attributes (Col. 9 lines 21-29)

"a plurality of domain encoders....data" as compressing the word entries based on delta values (Col. 11 line 40 – col. 12 line 26)

"a hashing component.....word list" as using index and pointers for the next available locations (col. 13 lines 45-50)

"a hash table generator.....lexicon memory" as using hash encoding to evenly distribute over the buckets (col. 14 lines 48-55; and Figs. 9 and 10)).

"a lexicon memory....word" as using index and pointers for the next available locations (col. 13 lines 45-50);using hash encoding to evenly distribute over the buckets (col. 14 lines 48-55; and Figs. 9 and 10)) and computing a delta value as an offset (col. 11 line 65 – col. 12 line 6).

3. Claims 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows (6021409) in view of Pringle et al (6470306) in further view of Poirer et al (6321372).

As per claim 12, Burrows (6021409) teaches:

"receiving the word....word information" as searching the index, accessing and decoding (col. 5 lines 15-35, and col. 6 lines 17-42)

Burrows (6021409) does not explicitly teach using the word manipulating apparatus for speech lexicon applications, however, Pringle et al (6470306) teaches a natural language translation system shuffling and translating word information between a user interface and a database (Fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art of speech word processing to incorporate the lexicon database

system and structure and taught by Burrows (6021409) into a speech translation system as taught by Pringle et al (6470306) because it would advantageously improve the storage and access of the word information (Burrows (6021409) col. 2 lines 61-66) into a natural language translation (Pringle et al (6470306), col. 2 lines 40-60).

The combination of Burrows (6021409) in view of Pringle et al (6470306) does not explicitly detail the use of the words in a speech lexicon memory, however, Poirer et al (6321372) teaches the providing of internet information in the form of providing linguistic services that include speech lexicons, with pronunciation and part of speech (Poirer et al (6321372), col. 8 lines 52-65). Therefore, it would have been obvious to one of ordinary skill in the art of internet information services to modify the teachings of the combination of Burrows (6021409) in view of Pringle et al (6470306) with the use of speech lexicons because it would advantageously be used to provide linguistic services (Poirer et al (6321372), col. 4 line 55 – col. 5 line 10).

As per claim 13, Burrows (6021409) teaches:

"prior to reading……word" as verifying the candidate for the query (col. 6 lines 34-37)

As per claim 14, Burrows (6021409) teaches:

"reading a plurality…..information" as reading words as well as marks (col. 7 lines 13-23)

As per claim 15, Burrows (6021409) teaches:

"plurality of fields.....associated field" as reading the attributes (Col. 9 lines 21-29)

As per claim 16, Burrows (6021409) teaches:

"reading a last field....received word" as reading a zero to indicate the end of the encoding (col. 12 lines 13-15)

As per claim 17, Burrows (6021409) teaches:

"initializing.....information" as initializing the readers for each searched word (col. 20 lines 52-67)

As per claim 18, Burrows (6021409) teaches:

"calculating a hash value....lexicon" as using hash encoding to evenly distribute over the buckets (col. 14 lines 48-55; and Figs. 9 and 10)).

Response to Arguments

4. Applicant's arguments dated 6/29/07 have been fully considered but are considered unpersuasive. Examiner notes additional reference to the Poirer et al reference to address the new claim limitations. As per applicant arguments on page 9 of the response, examiner disagrees and note the Burrows reference is not used for the speech lexicon aspect, but the

combination of Burrows in view of Sarukkai in view of Poirer is used to address the speech lexicon aspect of the claims. Burrows teaches the manipulation/tracking of word indexes, along with word dependent data and associated controls (col. 6 lines 60-67, col. 12 lines 50-67). The cited section of Sarukkai does provide motivation to combine the references (the Sarukkai reference provides a go-between of word dependent data). The arguments that "nothing in the cited section teaches how to modify the web page indexing method of Burrows to one tailored to....modification", examiner disagrees and argues that the "how to" is shown in a different recitation of Sarukkai – the essence of Sarukkai provides explicit program code in building the 'go-between' interface (Fig. 2, col. 11- col. 36), and summarized in Sarukkai (summary, col. 3 – col. 4). In the arguments on the bottom of page 9 of the response, applicant is attacking the references individually, and not addressing the combination of the references as a whole. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Examiner notes that the knowledge used to combine the references came from the references

themselves. Examiner also points to the reinforcement of the Poirer reference to address the new claim limitations.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richemond Dorvil, can be reached at (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MICHAEL OPSASNICK
PRIMARY EXAMINER

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09/12/07